Patent Claims

1. A communication terminal with a signal reception path which has a bandwidth widening device (ABE) for artificially widening the bandwidth of a received signal in the communication terminal, a digital/analog converter (1) and a loudspeaker (LS), and having a signal transmission path, which has a microphone (MIC), a transmission path low-pass filter (TP2) and an analog/digital converter (2),
characterized in that
an echo compensation device (AEC) is provided between one output of the bandwidth widening device (ABE) and a connecting point (3) of the signal transmission path, beyond the analog/digital converter (2) with respect to the microphone (MIC).

2. The communication terminal as claimed in claim 1, characterized in that
the bandwidth widening device (ABE) operates at a first sampling rate, and the echo compensation device (ACE) operates at a second sampling rate which is not the same as the first sampling rate, and a sampling rate conversion device (ARU) is provided for conversion of an output signal from the bandwidth widening device at the first sampling rate to the second sampling rate, and the output of said sampling rate conversion device connected to an input of the echo compensation device (AEC).

3. The communication terminal as claimed in claim 2, characterized in that
the sampling rate conversion device (ARU) interacts with a conversion low-pass filter (TP1) which has a pass characteristic which is matched to the second sampling rate for the echo compensation device (AEC), with the first sampling rate being higher than the second sampling rate.

4. The communication terminal as claimed in one of claims 2 or 3,
characterized in that
the first sampling rate for the bandwidth widening device (ABE) is 16 kHz, and the second sampling rate for the echo compensation device (ACE) is 8 kHz.

5. The communication terminal as claimed in one of claims 3 or 4,
characterized in that
the pass characteristic of the conversion low-pass filter (TP1) for passing signal components is designed to be at least as high a frequency as the transmission path low-pass filter (TP2).

6. A method for artificially widening the bandwidth of a received signal in a communication terminal having a signal reception path and a signal transmission path, having the following successive steps:

a) sampling of the received signal in the signal reception path,

b) widening of the bandwidth of the received signal by means of a bandwidth widening algorithm on the basis of sample values obtained in step a), in order to obtain a widened received signal,

c) compensation for the echo on the widened received signal for the signal transmission path by means of an echo compensation algorithm, with the widened received signal being sampled.

7. The method as claimed in claim 6, in which the bandwidth widening in step b) is carried out at a first sampling frequency, and the sampling in step c) is carried out at a second sampling frequency, which is not the same as the first sampling frequency, and a widened received signal which has been obtained on the

basis of step b) is converted to the second sampling frequency before step c) is carried out.